



FAST-1 (h): 293T Lysate: sc-128600

BACKGROUND

Xenopus winged-helix factor, xFAST-1 (forkhead activin signal transducer-1) is a transcription factor that forms a complex with the receptor-regulated Smad protein, Smad2 and directly binds to activin response elements on DNA. The human homolog FAST-1 and the corresponding mouse homolog, designated FAST-2, share significant sequence homology with xFAST-1, including a conserved N-terminal forkhead domain that consists of 110 amino acid residues and is essential for binding DNA and regulating transcription in embryogenesis, in tumorigenesis and in the maintenance of differentiated cell states. FAST-1 and FAST-2 also contain a distinct C-terminal Smad interaction domain that is required for the association with various Smad proteins, including Smad2, Smad3 and Smad4. Expression of FAST-1 and FAST-2 is predominantly observed during early development, with lower levels detected in adult tissues. FAST-1 and FAST-2 mediated DNA binding is attenuated by both TGF β and activin, indicating that these FAST proteins mediate TGF β induced signal transduction.

REFERENCES

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2. Labbe, E., et al. 1998. Smad2 and Smad3 positively and negatively regulate TGF β -dependent transcription through the forkhead DNA-binding protein FAST-2. *Mol. Cell* 2: 109-120.
3. Zhou, S., et al. 1998. Characterization of human FAST-1, a TGF β and activin signal transducer. *Mol. Cell* 2: 121-127.
4. Weisberg, E., et al. 1998. A mouse homologue of FAST-1 transduces TGF β superfamily signals and is expressed during early embryogenesis. *Mech. Dev.* 79: 17-27.
5. Liu, B., et al. 1999. FAST-2 is a mammalian winged-helix protein which mediates transforming growth factor β signals. *Mol. Cell. Biol.* 19: 424-430.
6. Yeo, C.Y., et al. 1999. The role of FAST-1 and Smads in transcriptional regulation by activin during early *Xenopus* embryogenesis. *J. Biol. Chem.* 274: 26584-26590.
7. Nagarajan, R.P., et al. 1999. Smad3 inhibits transforming growth factor- β and activin signaling by competing with smad4 for FAST-2 binding. *J. Biol. Chem.* 274: 31229-31235.

CHROMOSOMAL LOCATION

Genetic locus: FOXH1 (human) mapping to 8q24.3.

PRODUCT

FAST-1 (h): 293T Lysate represents a lysate of human FAST-1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

FAST-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive FAST-1 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.